

REMARKS

This application has been carefully reviewed in light of the Office Action mailed May 18, 2007. Claims 1-27 are pending. The Office Action rejects Claims 1-27. Applicants respectfully request reconsideration and favorable action of all pending claims in view of the following remarks.

Section 112 Rejections

The Office Action rejects Claims 1-27 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse this rejection for at least the reasons given below.

The rejection of independent claims 1 and 14 is improper at least because they recite “a dispersive direction” and “a non-dispersive direction” in a manner that particularly points out and distinctly claims the subject matter which Applicants regard as the invention. The Office Action incorrectly states that “[t]he applicant claims that the devices disperse and focus channels ‘in a direction’” and that this language is “unclear.” None of the pending claims, however, include the limitation “in a direction,” as referenced in the Office Action. Rather, Applicants’ claims recite “a dispersive direction” and “a non-dispersive direction” for clear differentiation.

The Office Action further states that “it is unclear what is meant by ‘a dispersive direction’ and a ‘non dispersive direction,’” but this is incorrect. Issued patent claims commonly distinguish directional limitations in this manner. Moreover, the example embodiment illustrated in FIGURE 1 discloses “focusing of the optical signal 120 in both the dispersive and non-dispersive directions D1, D2 in order to project a specifically shaped spot that maximizes the number of mirrors on the MEMS array in the SLM 180.” *See* page 8 line 20 through page 9 line 2. In the particular example embodiment of FIGURE 1, dispersive direction D1 is perpendicular to the non-dispersive direction D2. *See* page 8, lines 16-17. The claim language is therefore clear, distinct, and supported by the specification.

The Office Action also states that “the second light directing device does not appear to ‘focus the channels on the light modulating device,’” but that “other elements do this (160).” Applicants assume the Office Action refers to Claim 1, which recites “a second light-

directing device configured to focus the multiple wavelength channels in the dispersive direction for projection onto the light modulating device.” The second light-directing device illustrated in the example embodiment of FIGURE 1 is second lens 170. *See* page 6, lines 8-9. The specification further discloses that “signal 120 continues to diverge” as it “travels from the channel separation device 140 to the second lens 170,” but that “diverging of the optical signal 120 is curtailed through the refracting/focusing of the second lens 170, and the signal 120 is reflected by two more fold mirrors 160, before being redirected into an SLM 180 by a fourth fold mirror 160.” *See* page 7, lines 5-13 (emphasis added). The example embodiment described with reference to FIGURE 1 thus supports, in the very least, the above limitation of Claim 1.

In regard to Claim 14, the Office Action states that “the applicant claims ‘a method of modulating’ yet NO MODULATION IS DONE in the claims.” This conclusion is incorrect because Claim 14 recites “dispersing the multiple wavelength channels,” “focusing the multiple wavelength channels in a non-dispersive direction,” and “focusing the multiple wavelength channels . . . in the dispersive direction,” each step therefore modulating the optical signal in a particular manner.

For at least the above reasons, independent claims 1 and 14 are allowable, as are all claims depending therefrom. Favorable action is requested.

Drawing Objections

The Office Action objects to the drawings under 37 CFR 1.83(a), stating that the “memes [sic] mirror array if [sic] claims 2 and 15 . . . must be shown or the feature(s) canceled from the claim(s).” Applicant respectfully traverses this objection for the reasons given below. As clarified in 37 CFR 1.83(a), the regulation cited in the Office Action as the basis for the rejection, “conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol . . .”. 37 CFR 1.83(a); *see also* 35 U.S.C. § 113 (drawings are only required “where necessary for the understanding of” the invention). Applicants’ FIGURE 1 graphically illustrates spatial light modulator (SLM) 180 and discloses, in one example embodiment, that “each individual channel within the signal 120 may be projected as an independent optical spot onto a MEMS mirror array (not illustrated) within the SLM 180 for optical processing the reflection of individual

channels in the signal 120 with the mirrors of the MEMS array.” *See* page 7, lines 17-21 (emphasis added). Furthermore, FIGURE 2 “shows a plan view of . . . optical signal spots 230 on a MEMS mirror array 210.” *See* page 11, lines 10-12 (emphasis added). As Applicants have both illustrated and described a MEMS mirror array in a manner sufficient to understand the invention, the objection to the drawings under 37 CFR 1.83(a) is improper. Favorable action is requested.

Section 103 Rejections

The Office Action rejects Claims 1-27 under 35 U.S.C. § 103(a) as being unpatentable over Golub et al. (20040156581) (“*Golub*”). The Office Action further rejects Claims 1-27 under 35 U.S.C. § 103(a) as being unpatentable over Brophy et al. (7162115) (“*Brophy*”). Applicants respectfully traverse these rejections for the reasons given below.

Claim 14 is allowable at least because *Golub* fails to disclose, teach, or suggest “focusing the multiple wavelength channels in a non-dispersive direction” and “focusing the multiple wavelength channels focused in the non-dispersive direction in the dispersive direction for projection onto the light modulating device.” The Office Action fails to identify any portion of *Golub* that teaches the above limitations. There is none. Although the Office Action associates planar mirrors 110, 112 of *Golub* with a “first light directing device” and planar mirrors 118 or 120 with a “second directing device,” such associations are incorrect. Planar mirrors 110, 112, 118, and 120 merely “reflect the beams” *Golub*, par. 0042. Reflecting, but not focusing, light by planar mirrors does not constitute either limitation of “focusing the multiple wavelength channels in a non-dispersive direction” or “focusing the multiple wavelength channels focused in the non-dispersive direction in the dispersive direction for projection onto the light modulating device.” Therefore, not only does *Golub* fail, according to the Office Action, to “specifically teach that his device is a modulator,” *Golub* further fails to disclose, teach, or suggest, all of the other claim limitations. For at least these reasons, Claim 14 is allowable, as are all claims depending therefrom. Claim 1 and its depending claims are allowable at least for analogous reasons. Favorable action is requested.

With regards to *Brophy*, Claim 14 is allowable at least because *Brophy* fails to disclose, teach, or suggest, “dispersing the multiple wavelength channels in a dispersive direction.” The Office Action associates the diffraction grating 130 in FIGURE 5 of *Brophy*

with a dispersive device, but *Brophy* fails to illustrate or describe the same as “dispersing the multiple wavelength channels in a dispersive direction.” Rather, the beams in FIGURE 5 of *Brophy* appear to pass directly through diffraction grating 130 without any sort of dispersion and consequently the beams have no discernable dispersion direction. Because *Brophy* fails to disclose, teach, or suggest, “dispersing the multiple wavelength channels in a dispersive direction,” *Brophy* further fails to disclose, teach, or suggest, “focusing the multiple wavelength channels in a non-dispersive direction” and “focusing the multiple wavelength channels focused in the non-dispersive direction in the dispersive direction for projection onto the light modulating device.” For at least these reasons, independent Claim 14 is allowable, as are all claims depending therefrom. Claim 1 and its depending claims are allowable at least for analogous reasons. Favorable action is requested.

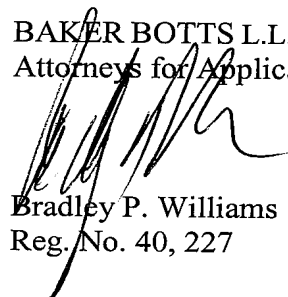
CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner believes that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact the undersigned Attorney for Applicants at the Examiner's convenience.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to **Deposit Account No. 200668 of Texas Instruments.**

Respectfully submitted,
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